

REMARKS

Claims 1-14 are pending in the application. Claims 1-4, 13 and 14 are withdrawn from consideration. Applicant has cancelled claims 1-4, 13 and 14 without prejudice. The Examiner objects to the drawings. The Examiner's objections and rejections are addressed below in substantially the same order as in the office action.

OBJECTIONS TO THE DRAWINGS

The Examiner objects to the drawings as failing to comply with 37 CFR 1.84 (p)(5) because they do not contain reference signs mentioned in the description. Applicant concurrently submits corrected drawing sheets in compliance with 37CFR 1.12 (d). Figure 3 has been amended to show the features 47 and 49. The numeral 42 has been deleted from Figure 3.

REJECTIONS UNDER 35 USC § 102 & 103

Claims 5-12 stand rejected under 35 USC § 102(b) as being anticipated or obvious in view of Thomason et al. (USP 4,201,265).

With respect to amended claim 5, Thomason et al does not teach or suggest a filler material positioned in an inner volume where the filler material prevents cement from occupying a substantial volume. The feature 52 and 54 that the Examiner contends are filler material are described as rails for forming a guide path. As is apparent in Figure 1, the area identified by the lead line for 24 is largely open and would be filled by any cement flowing through the mandrel 12. Because the features 52 and 54 do not prevent cement from occupying a substantial volume, Thomason et al does not teach each and every aspect of claim 5. Thus, amended claim 5 is believed to be in condition for allowance.

With respect to claim 6, Thomason does not disclose a mandrel that has features that induce turbulent flow. The Examiner contends, in part, that Thomason et al. teaches surface discontinuities formed to induce fluid flow turbulence and refers to numeral 78 of Figure 5. However, the specification to the cited reference clearly describes the recess 78 as a feature that helps to bend lips 70 and 72 against the body 12 to reduce a gap 63:

As best seen in FIGS. 1 and 2, the present invention is directed to providing a deformable lip 70 and 72 over the longitudinal outer edges of each of the rails 52 and 54, respectively, which protrude outwardly from the rails as best seen in FIG.

2. After the rails 52 and 54 have been secured in place in the body 12, the lips 70 and 72 bent outwardly, as best seen in FIG. 4 towards the inside of the body 12 thereby blocking the gaps 63 and preventing wirelines from catching in the gaps 63 between the rails 52 and 54 and the inside of the body 12. The deformable lips 70 and 72 may be formed in any desired manner such as casting or forging integrally with the rails 52 and 54 or by cutting a longitudinal recess 74 and 76 out of the front side 60 of the rails 52 and 54, respectively. And as shown in FIG. 5, **a recess 78 and 80 may be cut from the outsides 62 of the rails 52 and 54, respectively.** In the embodiment of FIG. 5, the lips **70 and 72 would then be bent outwardly** and preferably against the inside of the body 12.

Thus, the recess 78 is not formed to induce fluid flow turbulence. Indeed, it appears that the recess 78 would largely be eliminated once the lips 70 and 72 are bent against the body 12. In any event, contrary to the Examiner's contention, a surface discontinuity does not inherently induce fluid flow turbulence. As is known in the art, the state of fluid flow is dependent on a number of factors. Generally speaking, whenever the Reynolds number is less than about 2,000, flow in a pipe is generally laminar, whereas, at values greater than 2,000, flow is usually turbulent. Thomason et al does not discuss the state of flow through the described side pocket mandrel. Applicant finds no details in Thomason et al that would establish a value such as a Reynolds number to determine whether the device of Thomason et al generates turbulent flow or laminar flow. Applicant respectfully submits that without such a technical basis, the present rejection of claim 6 is improper and that claim 6 is in condition for allowance.

Claims 7-12 depend from claim 1, a claim believed to be in condition for allowance. Thus, Applicant submits that claims 7-12 are also allowable on at least those grounds.

NEW CLAIMS

New claims 15-17 depend from claim 1, a claim believed to be in condition for allowance. Thus, Applicant submits that claims 15-17 are also allowable on at least those grounds.

New claims 18-33 recite in part a device having an enlarged diameter section generating turbulent flow when a working fluid flows therethrough. For the reasons discussed in connection with claim 6, Applicant submits that claims 18-33 are in condition for allowance.

CONCLUSION

For all the foregoing reasons, Applicant submits that the application is in a condition for allowance. No fee is believed due for this paper. The Commissioner is hereby authorized to charge any additional fees or credit any overpayment to Deposit Account No. **02-0429 (284-30699-US)**.

Respectfully submitted,

Dated: April 10, 2006



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CERTIFICATE OF MAILING

I hereby certify that this correspondence and any documents referred to as enclosed or attached is being deposited with the United States Postal Service on as First Class Mail, postage prepaid, in an envelope addressed to: Attention: Mail Stop: **Amendment**, Examiner, **Nicole A. Coy**, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313 on this 10th day of April 2006.


Margaret A. Pruitt